

Remarks

Applicants have amended claim 13, and claims 1 to 15 remain pending in this patent application. Applicants now address each and every point raised in the above-identified Office action as follows:

I. Rejection of Claims Under Section 112

Claims 13 to 15 have been rejected under 35 U.S.C. § 112. Applicants have amended claim 13 to correct the dependency from claim 12 rather than from claim 11. Accordingly, Applicants submit that this amendment addresses the issue raised by the Examiner and respectfully request that the rejection of claims 13 to 15 under 35 U.S.C. § 112 be reconsidered and withdrawn.

II. Rejection of Claims Under Section 102 Based on Young

Claims 1, 2, 4, 7, 11 and 12 have been rejected under 35 U.S.C. § 102 as being allegedly anticipated by Young. Applicants' invention as recited in independent claims 1, 7 and 11 comprises a heat exchanger including the feature of a header plate having: (a) an outside diameter that fits within an inside wall surface of the shell to provide a nested junction therebetween (independent claims 1 and 11); or (b) an axially projecting section that extends from the header plate outside diameter and that fits within a recessed section of the shell

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inside surface to provide a nested attachment therebetween (independent claim 7).

Accordingly, a feature of the invention recited in each of the independent claims is that the nested attachment junction is formed between the header plate and an inside surface of the shell itself.

Young discloses a heat exchanger comprising a shell (8) having end housing-castings (6 and 7) attached to opposed shell ends. The heat exchanger further includes a core unit (9) comprising a number of tubes (15) attached together by tube plates (13). The core unit is enclosed within the shell and the end housing-castings. However, unlike Applicants' claimed heat exchanger, Young does not disclose a nested attachment that is formed between a header plate and the shell. Rather, Young discloses and illustrates a construction where the tube plates are attached within a recess (10) that is formed not in the shell but along an inside surface of the end housing-castings.

Thus, Young fails to disclose or remotely suggest a heat exchanger construction having a nested attachment formed between the tube bundle header plate and the shell itself. To be properly anticipating under 35 U.S.C. § 102, a cited reference must disclose each and every feature of the invention as recited in the claim. Here, because Young fails to disclose the invention feature noted above, Applicants submit that Young does

not properly anticipate its invention as recited in independent claims 1, 7 and 11. In view thereof, Applicants respectfully request that the rejection of these independent claims, and dependent claims 2, 4, and 12 depending respectively therefrom, under 35 U.S.C. § 102 be reconsidered and withdrawn.

III. Rejection of Claims Under Section 102 Based on Stafford

Claims 1 to 4, 7, 8 and 11 to 13 have been rejected under 35 U.S.C. § 102 as being allegedly anticipated by Stafford. As noted above in Section II, Applicants' invention as recited in independent claims 1, 7 and 11 comprises a heat exchanger including the feature of a header plate having: (a) an outside diameter that fits within an inside wall surface of the shell to provide a nested junction therebetween (independent claims 1 and 11); or (b) an axially projecting section that extends from the header plate outside diameter and that fits within a recessed section of the shell inside surface to provide a nested attachment therebetween (independent claim 7).

Thus, a feature of the invention recited in each of the independent claims is that the nested attachment junction is formed between the header plate and an inside surface of the shell itself.

Stafford discloses a heat exchanger comprising a shell (82) having top and bottom flanges (14 and 16) attached to

opposed shell ends. The heat exchanger further includes a plurality of vertical tubes that are positioned within the shell. A tube sheet assembly is used to connect the tubes together. However, unlike the claimed heat exchanger of Applicants' claimed invention, Stafford (like Young) fails to disclose a nested attachment formed between a header plate and the shell itself. Rather, Stafford discloses and illustrates a tube sheet assembly that is attached within a ledge (62) that is formed not in the shell but along an inside surface of the flanges.

Thus, like Young, Stafford too fails to disclose or remotely suggest a heat exchanger construction having a nested attachment formed between the tube bundle header plate and the shell itself. To be properly anticipating under 35 U.S.C. § 102, a cited reference must disclose each and every feature of the invention as recited in the claim. Here, because Stafford fails to disclose the invention feature noted above, Applicants submit that Stafford does not properly anticipate its invention as recited in independent claims 1, 7 and 11. In view thereof, Applicants respectfully request that the rejection of these independent claims, and dependent claims 3, 4, 8 to 10, 12 and 13 depending respectively therefrom, under 35 U.S.C. § 102 be reconsidered and withdrawn.

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IV. Allowable Subject Matter

Claims 5, 6, 9 and 10 have been identified as being allowable if rewritten into independent form. Applicants acknowledge with appreciation the allowability of these claims. However, for the reasons presented, Applicants believe that independent claims 1, 7 and 11 are properly allowable in their present conditions. For this reason, rather than amending the claims identified above as being allowable, Applicants at this time wish to pursue allowance of the currently pending claims.

V. Conclusion

For the reasons presented above, Applicants respectfully request that the rejections of the claims under 35 U.S.C. §§ 112 and 102 be reconsidered and withdrawn, and that claims 1 to 15 pending in this application be passed to allowance.

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Respectfully submitted,



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